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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,074	03/28/2001	Huig Klinkenberg	ACO2774US	4035

7590

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EXAMINER

BERMAN, SUSAN W

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 06/25/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/820,074

Applicant(s)

KLINKENBERG ET AL.

Examiner

Susan W Berman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 14 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 14, it is not clear whether applicant intends to set forth that the composition is curable by exposure to UV light or to set forth a method for curing the composition by exposure to UV light. The claim is also rendered indefinite by the use of an abbreviation. The abbreviation "UV" should be replaced with "ultraviolet".

Claim 15 provides for the use of a composition, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 15 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1, 4, 5 and 8-15 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 94/28075. WO '075 discloses the instantly claimed composition components (A), (B) and (C). WO '075 teaches that the basic catalyst is blocked with an acidic compound and becomes unblocked under the influence of UV light. Therefore, the basic catalyst disclosed ~~provides~~ corresponds to component (D) as well as to component (C) as defined in instant claim 1.

Claims 1, 4, 5 and 8-15 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 448 154 A1. EP '154 discloses the instantly claimed composition components (A), (B) and (C). EP '154 teaches that the basic catalyst is blocked with an acidic compound and becomes unblocked under the influence of UV light. Therefore, the basic catalyst disclosed provides corresponds to component (D) as well as to component (C) as defined in instant claim 1.

Claims 1, 4, 5 and 8-15 are rejected under 35 U.S.C. 102(b) as being anticipated by CA 2,101,504 or equivalent EP 0 582 188. CA '504 and EP '188 each discloses the instantly claimed composition components (A), (B) and (C). CA '504 and EP '188 each teaches that the basic catalyst is blocked with an acidic compound and becomes unblocked under the influence of UV light. Therefore, the basic catalyst

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disclosed provides corresponds to component (D) as well as to component (C) as defined in instant claim

1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/10964, published March 02, 2000, in combination with CA 2 101 504 A. The translation provided by applicant in copending Serial No. 09/865025 is relied upon for the disclosure of WO '964.

WO '964 discloses alpha-ammonium alkenes, imminium alkenes and amidinium alkenes in the form of tetraryl- or triaryl-alkylborate salts for use in systems crosslinkable by base catalysis or in hybrid systems. Compositions disclosed comprise preferable base catalysable binders "n" corresponding to the instantly claimed compositions (page 15). WO '964 does not teach also adding Lewis or Bronsted bases as catalysts. CA '504 discloses compositions comprising the instantly claimed composition components (A), (B) and (C)/(D). CA '504 teaches that the basic catalyst is blocked with an acidic compound and becomes unblocked under the influence of UV light. The specific catalysts taught by CA '504 correspond to the catalyst (C) disclosed by applicant. The basic catalysts also meet the definition of the photolabile base (D) in instant claim 1.

It would have been obvious to one skilled in the art to select a composition comprising an ethylenically unsaturated carbonyl compound and a polymer containing activated CH₂ groups from the binder systems taught by WO '964 because it is one of the preferred base-catalysable binders. It would

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have been obvious to one skilled in the art to employ a combination of the base catalysts taught by WO '964 and WO '075 in the compositions disclosed by either reference. One of ordinary skill in the art at the time of the invention would have been motivated by an expectation of taking advantage of the curing effects of the alpha-ammonium alkenes, imminium alkenes and amidinium alkenes in the form of tetraryl- or triaryl-alkylborate salts taught by WO '964 and the curing effects of the basic catalyst that is blocked with an acidic compound and becomes unblocked under the influence of UV light taught by WO '075.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/10964, published March 02, 2000, in combination with Akkerman (4,602,061). The translation provided by applicant in copending Serial No. 09/865025 is relied upon for the disclosure of WO '964.

The disclosure of WO '964 is discussed above. Akkerman discloses compositions comprising components corresponding to instantly recited components (A) and (B) and a basic catalyst having a pKa of at least 12 (column 4, lines 15-49). WO '964 does not teach also adding Lewis or Bronsted bases as catalysts. Akkerman does not teach employing a photolabile base.

It would have been obvious to one skilled in the art to select a composition comprising an ethylenically unsaturated carbonyl compound and a polymer containing activated CH₂ groups from the binder systems taught by WO '964 because it is one of the preferred base-catalysable binders. It would have been obvious to one skilled in the art to employ a combination of the basic catalyst taught by Akkerman and the photolabile base catalyst taught by WO '964 in compositions comprising components corresponding to (A) and (B) in instant claim 1. One of ordinary skill in the art at the time of the invention would have been motivated by an expectation of providing a more thorough cure since both catalysts are disclosed in the prior art to be useful basic catalysts for curing compositions comprising the same components. Akkerman teaches that the disclosed compositions cure quickly without heating and have

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excellent hardness. WO '964 teaches that the photobase generators disclosed enable preparation of one-pot systems with high storage stability because polymerization is not triggered until after irradiation.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/41524 in combination with CA 2,101,504 or Akkerman (4,602,061). WO '524 discloses photoactivatable nitrogen-containing bases based on alpha-amino alkenes for initiating polymerization of compositions such as "n" defined on page 14 and corresponding to the instantly claimed composition. WO '524 does not teach also adding a Lewis or Bronsted base or the borate salts set forth in instant claim 2. The disclosures of CA '504 and Akkerman are discussed above.

It would have been obvious to one skilled in the art to select a compositions comprising an ethylenically unsaturated carbonyl compound and a polymer containing activated CH₂ groups from the binder systems taught by WO '524 because it is one of the preferred base-catalysable binders.

It would have been obvious to one skilled in the art to employ a combination of the base catalysts taught by WO '524 and CA '504 in the compositions disclosed by either reference. One of ordinary skill in the art at the time of the invention would have been motivated by an expectation of taking advantage of the curing effects of the discloses photoactivatable nitrogen-containing bases based on alpha-amino alkenes taught by WO '524 and the curing effects of the basic catalyst that is blocked with an acidic compound and becomes unblocked under the influence of UV light taught by CA '504.

It would have been obvious to one skilled in the art to employ a combination of the basic catalyst taught by Akkerman and the photoactivatable nitrogen-containing base catalyst taught by WO '524 in compositions comprising components corresponding to (A) and (B) in instant claim 1. One of ordinary skill in the art at the time of the invention would have been motivated by an expectation of providing a more thorough cure since both catalysts are disclosed in the prior art to be useful basic catalysts for curing compositions comprising the same components. Akkerman teaches that the disclosed compositions cure

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quickly without heating and have excellent hardness. WO '524 teaches that the photoactivatable nitrogen-containing bases based on alpha-amino alkenes are useful photoinitiators for base-catalysable reactions. WO '524 teaches that the disclosed enable amino alkenes enable preparation of one-pot systems with high storage stability because polymerization is not triggered until after irradiation.

Conclusion

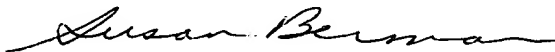
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Matsunaga et al (5,854,360) disclose compositions comprising a blocked polyisocyanate, an active hydrogen compound, such as polyhydric alcohols or polyamines, and an ammonium borate catalyst for coating materials for automobiles. The polyisocyanate can be blocked with acetoacetate or malonate groups. Regelman (4,602,049) discloses amidinium salts as active catalysts for converting isocyanates to isocyanurate/carbodiimide products. WO 94/28075 and EP 0582 188A1 are cumulative of CA 2101504A, with respect to the rejections under 35 USC 103(a) set forth above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 703 308 0040. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703 308 2462.

The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9310 for regular communications and 703 872 9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0661.



Susan W Berman

Primary Examiner

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SB

June 18, 2002